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Oral Diagnostic Techniques - Knowledge Of or Skill In A Survey of 47 Dental Schools

Introduction

If one accepts the notion that dentists have a responsibility for the general health of their patients particularly in regard to the diagnosis and treatment of those disease processes which effect the oral cavity then it follows that dental students must be taught those techniques which will enable them to fulfill their obligation. The function of a dental school is then to teach these various techniques, that is "to impart knowledge of or skill in"¹ the subject being taught. This concept of the word teach is rather interesting for there is quite a bit of difference between knowledge of or skill in many areas. For example, teaching restorative dentistry involves both knowledge and skill. One would hardly consider our function as teachers complete after exposing students to lectures on dental materials and the concept of cavity preparation. Only through the experience of doing is one likely to acquire that blending of the theoretical knowledge and practical skill called competence. Of course teaching the various aspects of restorative dentistry is a primary function of dental schools and these areas are generally taught in the fullest sense of imparting both knowledge and clinical skill. It is the purpose of this paper to examine the manner in which some selected diagnostic techniques of particular value in the diagnosis of oral conditions and diseases are taught in dental schools.

Materials and Methods

A questionnaire was sent to the senior class president of all dental schools accredited by the American Dental Association. The questionnaire dealt with the method of teaching the techniques of biopsy, cytology and laboratory tests. The senior class president of each school was asked:

1. Do students receive classroom instruction on these techniques?
- A

2. Are students allowed to actually perform the techniques?
3. Are techniques performed by the students as the occasion arose, as a requirement, or almost never?

Results

Responses were received from 47 of the 52 dental school senior class presidents. The results are presented in Table I. From this table it can be seen that 11 schools have as a requirement that students perform one or more of the diagnostic techniques. Of the 11 schools, ten schools required at least one biopsy, 4 schools required a laboratory test and one school had a cytology requirement.

Discussion

It should be kept in mind that the data presented represents the opinions of the senior class presidents and may not coincide with the actual curriculum, either in theory or practice, of the individual schools. For example, it is difficult to believe that there are 8 dental schools which would not allow a student to perform a biopsy, a cytology, or order a laboratory test. On the other hand the opinion of class presidents may well be more candid than official school policy.

It is apparent that dental schools teach the diagnostic techniques of biopsy, cytology and the ordering and interpreting of laboratory tests primarily by classroom instruction. This amounts to imparting knowledge without developing clinical skill. One might well ask if imparting knowledge regarding the use of these diagnostic techniques is not sufficient. A survey on the use of diagnostic techniques by 714 dentists attending the 115th Annual Convention of The American Dental Association by Payne² showed that dentists who had performed a diagnostic test in dental school were more likely ($p < .001$) to perform diagnostic tests in practice. It then becomes necessary to evaluate what the

behavioral objectives are in regard to the teaching of diagnostic techniques. If one wishes to prepare students to pass various tests and licensing boards, classroom instruction alone is adequate. If, on the other hand, the objective is to provide students with the training necessary to utilize these techniques to improve the quality of health care, then classroom instruction alone apparently fails to provide the confidence and competence necessary for the dentist to perform these procedures in a private practice setting. Table I shows that 70 percent of the respondents indicated that diagnostic tests were performed as the occasion arose. From the comments of the class presidents it would be fair to surmise that for the majority of students the occasion never arose.

Summary and Conclusions

It is apparent that the primary method of teaching the diagnostic techniques of biopsy, cytology and the ordering and interpreting of laboratory tests is a didactic exercise. It is equally apparent that dentists tend to utilize in their daily practice only those techniques which they have mastered in dental school.^{2,3} Although the problem of any change which tends to expand a curriculum is appreciated, it is felt that, at the least, schools should establish minimum requirements in the area of diagnostic tests. This would insure that a student is given the opportunity to develop competence in their usage.

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1. The American College Dictionary edt. by Branhart, C.L., Random House N.Y.
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2. Payne, T.F.: The Utilization of Diagnostic Techniques A Survey of 714
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Table I

Classroom Instruction On:

	Number	Percent
Biopsy	47	100
Cytology	38	81
Laboratory Tests	38	81

Students May Perform:

Biopsy	37	79
Cytology	19	40
Laboratory Tests	15	32
None of Above	8	17

Diagnostic Tests Performed As:

Occasion Arises	33	70
A Requirement	11	23
Almost Never	13	28

Student Participation in The Teaching of Diagnostic Techniques - Responses from the senior class presidents of 47 dental schools.

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) A survey of 47 US Dental Schools revealed that in only 11 schools was there a practical requirement for a biopsy, laboratory test or cytology. The effect of the lack of practical experience on the utilization of these diagnostic techniques in private practice are discussed.		

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